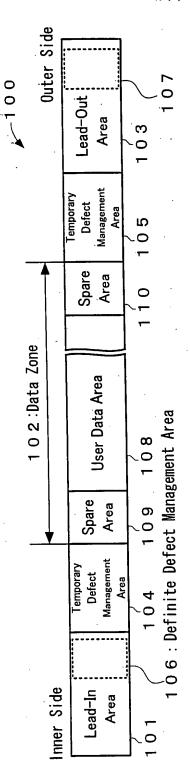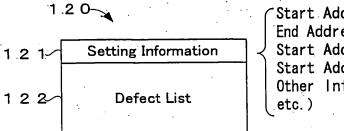DOCKET NO.: 8048-1136
INVENTOR: TAKESHI KODA ET AL
FILING DATE: JANUARY 4, 2006
TITLE: INFORMATION RECORDING MEDIUM, RECORDING APPARATUS AND RECORDING METHOD FOR INFORMATION RECORDING MEDIUM,
REPRODUCING APPARATUS AND REPRODUCING METHOD FOR INFORMATION RECORDING MEDIUM,
COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG. 1

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FIG. 2

120

121	Setting Information
122	Defect List

{ Start Address of User Data Area
End Address of User Data Area
Start Address of Inner Spare Area
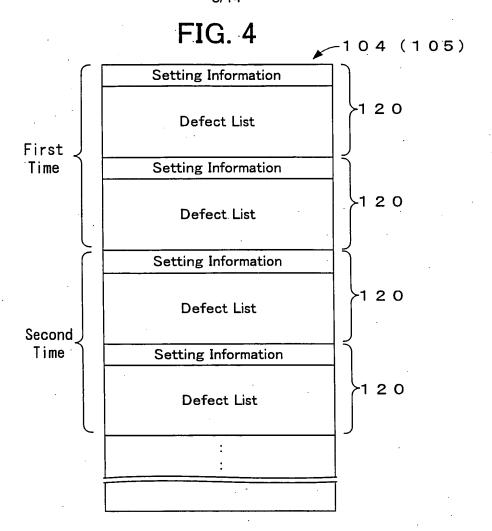Start Address of Outer Spare Area
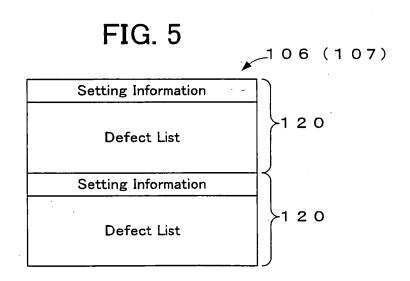Other Info. (Size of each Area, etc.)

FIG. 3

122

Defect Address	Spare Address	Other Info.
Address aaaa	Address gggg	
Address bbbb	Address kkkk	
Address cccc	Address mmmm	
Address dddd	Address nnnn	
⋮	⋮	

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FIG. 4

FIG. 5

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FIG. 6

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FIG. 7(a)

	4 Bytes	3 Bytes
	Defect Address	Spare Address
DFL Entry 1	Address A1	Address a1
DFL Entry 2	Address B1	Address b1
DFL Entry 3	Address C1	Address c1
DFL Entry 4	Address D1	Address d1

Defect List Generated by using
Offset Address

FIG. 7(b)

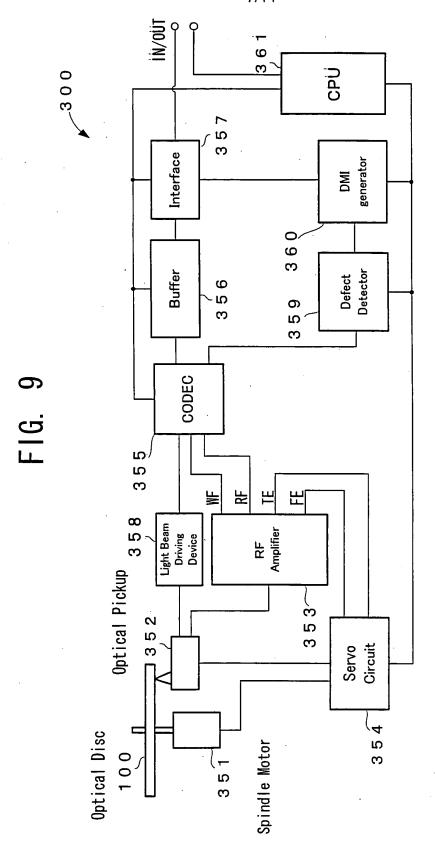|	4 Bytes	4 Bytes
	Defect Address	Spare Address
DFL Entry 1	Address A2	Address a2
DFL Entry 2	Address B2	Address b2
DFL Entry 3	Address C2	Address c2
DFL Entry 4	Address D2	Address d2

Defect List Generated by using
Physical Address

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FIG. 8

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
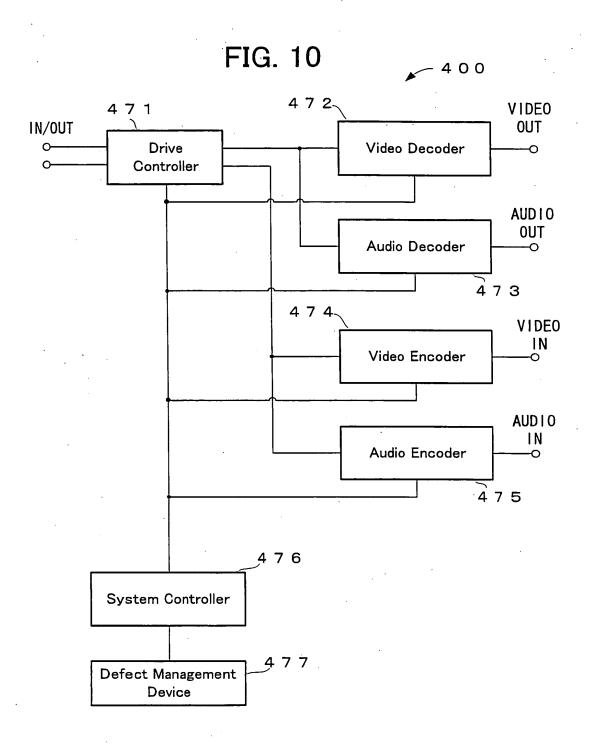AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG. 9

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
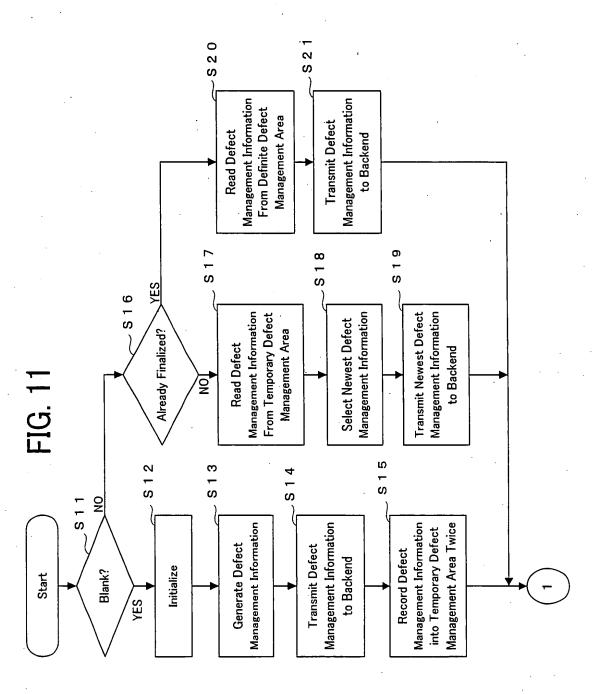AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG. 10

400

IN/OUT

471

Drive Controller

472

Video Decoder → VIDEO OUT

Audio Decoder → AUDIO OUT

473

474

Video Encoder ← VIDEO IN

Audio Encoder ← AUDIO IN

475

476

System Controller

Defect Management Device 477

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
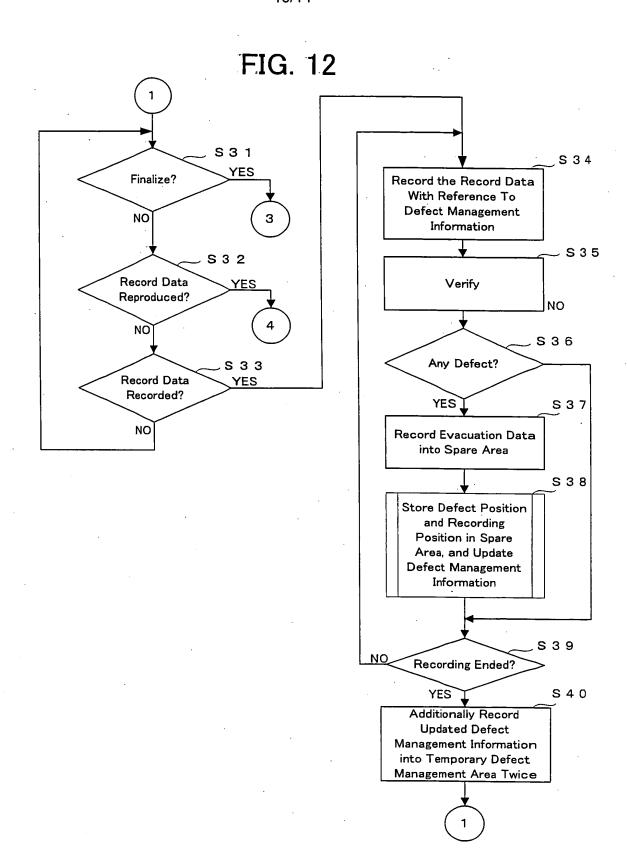AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG. 11

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
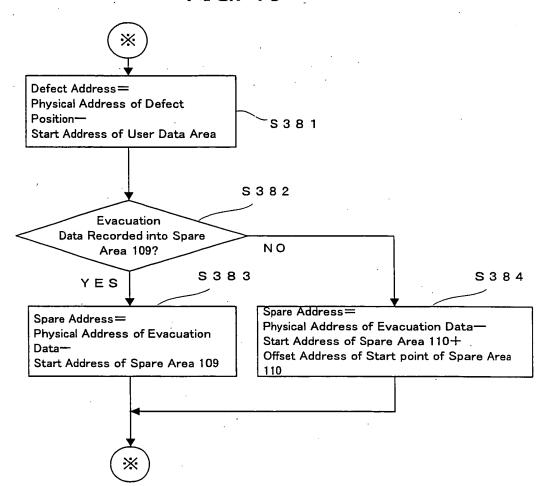10/14

FIG. 12

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FIG. 13

※

Defect Address＝
Physical Address of Defect
Position－
Start Address of User Data Area ～ S 3 8 1

Evacuation Data Recorded into Spare Area 109? — S 3 8 2

YES

NO

S 3 8 3

Spare Address＝
Physical Address of Evacuation
Data－
Start Address of Spare Area 109

S 3 8 4

Spare Address＝
Physical Address of Evacuation Data－
Start Address of Spare Area 110＋
Offset Address of Start point of Spare Area
110

※

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
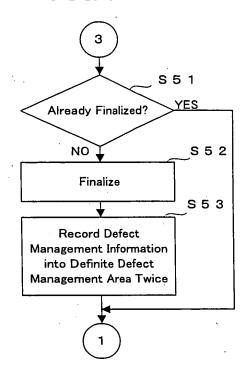AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG .14

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COPUTER PROGRAM FOR CONTROLLING RECORDING OR REPRODUCTION,
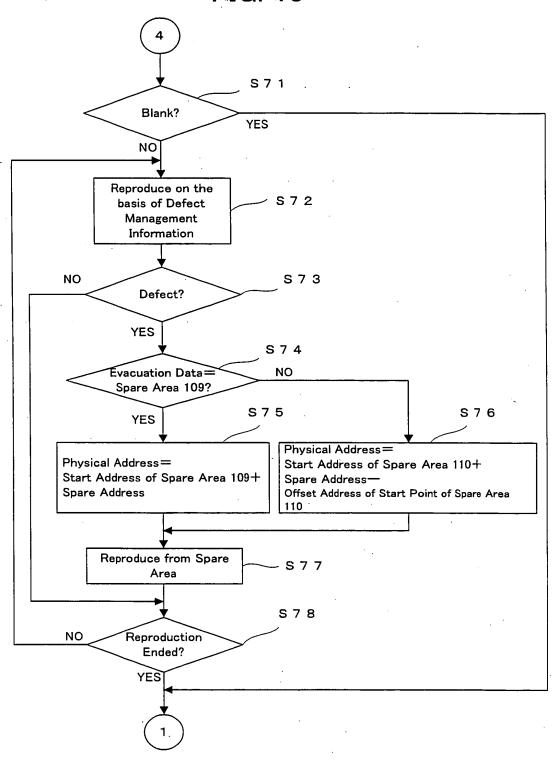AND DATA STRUCTURE INCLUDING CONTROL SIGNAL
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FIG. 15

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FIG. 16